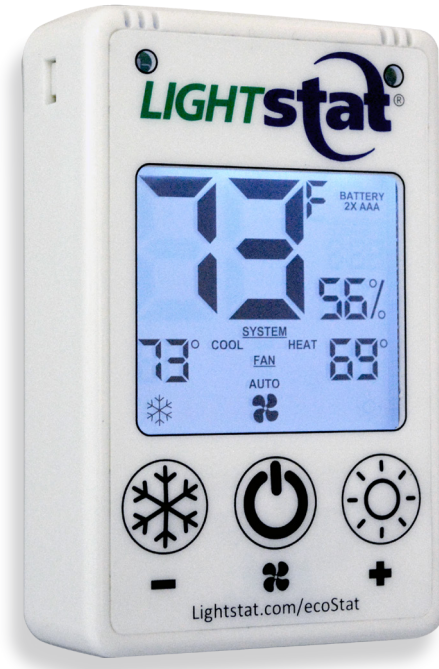# LIGHTstat®

ecoStat Thermostat

The **ecoStat** is a low cost automated thermostat that provides intelligent energy efficiency in the form of a modern, simple interface. The **ecoStat** is the perfect solution for tenant housing, dormitories and military housing.

KEY FEATURES

- Up to two stage heating and cooling with auto changeover.
- O/B terminal for heat pump applications.
- Mode independent fan control.
- Detachable backplate for easy installation.
- User interface to control power, mode, setpoints and fan.
- Large LCD to display current temperature, active mode and setpoints.
- Setpoint override functionality with countdown display.
- Pre-configurable setpoints, setback conditions, time delays, override duration and temperature units.
- Onboard digital temperature (and humidity) sensor.
- Custom configurations available - please consult factory at time of order.
- Temperature range 0°-70°C
- Digital temperature sensor maintains a relative accuracy of +/- 1°F.
- Humidity range 5%-95%
- Humidity sensor accuracy of +/-5 %RH.
- Battery operated or common wire configuration options available.

APPLICATIONS

Apartments/Condos

Tenant Housing
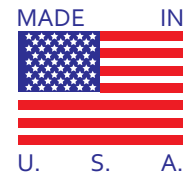
Dormitories

Assisted Living Families

Military Housing

Camp Cabins

Stockrooms

Mechanical Rooms

Lifetime LIGHTstat Warranty

Limited Lifetime Warranty
contact Customer Service for details

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U. S. A.

ecoStat Thermostat

Power Options
- Two AAA batteries
- Common Wire

Heating and Cooling
- Connections for 2 stages of heating and 2 stages of cooling.
- Configurable to allow single mode applications such as heat only or cool only.
- Auto changeover option when both modes are in use.
- O/B connection terminal for heat pump reversing valve control application.
- Automatically controls the Y1/ W1 output for heating and cooling.

Setpoints
- Setpoints for both heating and cooling to set the desired ambient temperature range.
- Default setpoints are factory configurable based on customer requirements.

Setback
- When setback is enabled the system will shift to using setback setpoints to conserve energy.

Time Delays
- Time delays are implemented on the system both to conserve energy as well as promote longevity of the mechanical equipment.
- Time delays implemented are startup delay, output minimum on and output minimum off.
- The output minimum on and output minimum off time delays are configurable based on customer request and the startup delays are randomized based on an internal algorithm. Default lock on/lock off timers are 45 seconds.

Temperature Units
- The temperature units displayed on the LCD are factory programmable and can be configured to either Fahrenheit or Celsius.

Temperature Range
- Temperature range 0°-70°C (32°-158°F)

Humidity Range
- Humidity range 5%-95%

Sensors
- Temperature and Humidity.
- The digital temperature sensor maintains a relative accuracy of +/- 1°F.
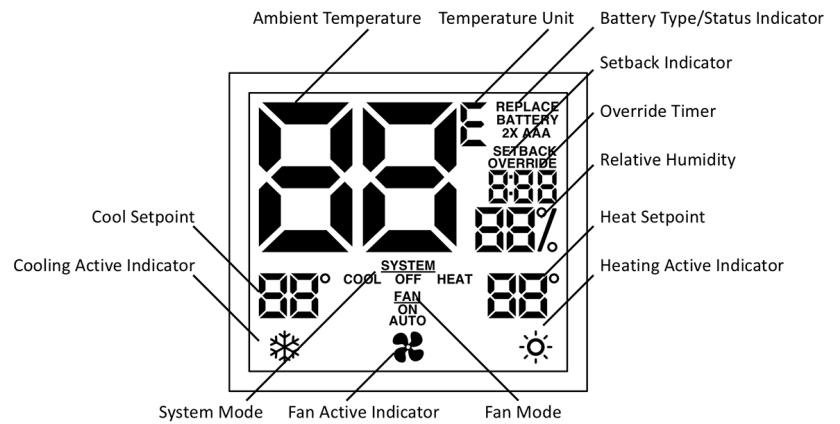- The humidity sensor accuracy is +/-5%RH.

External Connections
- A terminal block used for all external RTU connections is located on the backplate of the thermostat. The connections available on the terminal block are as follows:

R	(Power/Heating Power)
RC	(Cooling Power)
C	(Common)
G	(Fan)
W1	(Heat Stage 1) / **O/B** (Reversing Valve)
W2	(Heat Stage 2)
Y1	(Cool Stage 1) / **Y** (Heat Pump)
Y2	(Cool Stage 2)

LCD Display
- The LCD display will normally show values for current temperature, relative humidity, heating setpoint, cooling setpoint, fan mode, active outputs, temperature units, override, battery, and setback as shown below.

Ambient Temperature   Temperature Unit   Battery Type/Status Indicator

Setback Indicator

Override Timer

Relative Humidity

Heat Setpoint

Cool Setpoint

Cooling Active Indicator

Heating Active Indicator

System Mode   Fan Active Indicator   Fan Mode

- When a setpoint override period is in effect, the "Override" segment will illuminate and the override timer will display the remaining override time.
- If configured with setback enabled, the LCD will illuminate "Setback" when active. When the batteries are determined to be low, the word "REPLACE" will be indicated.

CONFIGURATIONS

Heating and Cooling:	1 Stage Heating 2 Stage Heating 1 Stage Cooling 2 Stage Cooling
O/B Configuration:	Heat Pump -Active Cooling Heat Pump -Active Heating
Default Set Points:*	Heating (ºF) Cooling (ºF)
Set Point Override:	Enabled - Duration (Minutes) Disabled
Setback:	Light or none
Lock on/Off Delays:	Delay (Seconds) or none
Units:	Fahrenheit Celsius

* configurable before shipping based on customer request

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